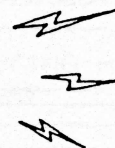


the CARRIER



the MOUNT DIABLO AMATEUR RADIO CLUB



W6CX

VOLUME XXXV - ISSUE 9 SEPTEMBER 1987 REPEATERS 147.06/223.74/441.325

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JIM HOUSE KA6IVF 372-0345

RACES/ARES

NET EVERY THURSDAY AT 1900 HOURS
CENTRAL C.C. COUNTY 145.680/S
JAMES HOUSE, KA6IVF, E.C.
372-0345
EAST C.C. COUNTY 146.540/S
WM. VAN VOORHIS, WA6ZFZ, E.C.
754-1214
SOUTH C.C. COUNTY 147.555/S
CARSON TAYLOR, K6TI, E.C.
820-5297
WEST C.C. COUNTY 145.11/-R
JAMES CROOKE, KB6JEC, E.C.
529-1900

QSY TO 147.735/-R AT 1920 HOURS

>SHERIFF'S UNIFORMED COMM. GROUP:<
FOR ALL INFORMATION CONTACT:-
VICKI N6KLS Coordinator
GLENN(OM) N6JRK 458-4527

MDARC GENERAL MEETING

This month's meeting will be held on Friday, September 18th at 8 PM at the Grace Presbyterian Church, 2100 Tice Valley Blvd., Walnut Creek. Why not plan to attend!

MDARC Public Service

Walnut Festival Parade, Saturday, Sept. 12. Sheriff's uniformed communications group. Contact Vicki N6KLS 458-4527.
Walnut Festival Footrace. Heather Farms Park. Sunday morning Sept 13, 0700 - 1000. Contact Dick Brown KT6X 676-9048.
Las Trampas Endurance Trailride.. Sunday September 13, 0600-1800. In Redwood and Anthony Chabot Regional Parks. Lunches provided, bring your own drinks Contact Jim KA6IVF 372-0345.
Bike Ride up Mt. Diablo from Danville for Children's Hospital. Sunday Oct. 4, 0600-1300. More operators needed. Contact Carson K6TI 820-5297. Sign up September meeting.

WA6DQN

* * * * *

EMERGENCY COMMUNICATIONS ACTIVITIES

Jim Perry, AA6CK - EC

W6CPD notes that Contra Costa County will conduct a disaster exercise on Friday, Sept. 25, from approximately 9 to 11 a.m. This is the first full scale exercise in many years, and will involve all county departments and six cities. RACES needs a large number of operators to participate in this activity.

For more information about RACES/ARES activities, amateurs are invited to check into the RACES/ARES nets listed above.

EDITORIAL

(World Radio, 9/87)

Regardless of how the "220 grab" comes out, I believe we radio amateurs should recognize an error in our ways has helped lead up to this situation. Back in the '60s, when radios were crystal-controlled, it was common practice to keep the frequencies of 'closed' repeaters and links secret. This was especially true on the 220 and 440 MHz bands. This was to prevent snoopers and jammers from crystallizing up on the frequencies. Of course, the frequencies were NOT published in any repeater directory.....

Things are different now. Modern radios have fast synthesizers that can scan the frequencies in an entire band in a matter of seconds. So now, what's the point in keeping 'closed' frequencies secret? Yet we continue to do so, and do not publish them in the directories.

The FCC Bureau of Engineering and Technology said they determined there was little usage of the amateur frequencies from 220 to 223 MHz because there was nothing listed in the ARRL Directory. True!! But that doesn't mean there is no usage there; it means we have been KEEPING IT A SECRET!.....

Let's wake up to the fact there are no secrets from modern synthesized radios. Let's publish the frequencies of those repeaters and links, and if they are closed, say so.....

This also applies to the frequencies of sub-audible tones. You might as well list them too, since anyone with a new radio can figure them out in minutes.....
=====

What is the difference between Maritime Mobile and Marine Mobile? Maritime Mobile is used when you are on salt water (oceans and seas), and Marine Mobile is used when you are on fresh water (rivers and lakes).

NOVICE DIGIPEATERS OK...MAYBE
(World Radio July 1987)

Now that we have Novice enhancements, Novices may transmit packet and may have their packet transmission repeated by digipeaters operated by other amateurs, but at first glance it would seem they may not themselves operate digipeaters.

Section 97.85(i) in the FCC rules, just recently added in the Novice enhancement proceeding, seems quite clear: "no station at which the control operator or station licensee holds a Novice Class operator license shall be in repeater operation." And section 97.3(1) defines repeater operation as "...retransmitting automatically signals of other Amateur Radio Stations."

But FCC staffers don't see it that way. Digipeaters are somewhat different from voice repeaters. Voice repeaters receive a signal on one frequency and retransmit it simultaneously on another frequency, while a digipeater received a message completely first, then retransmits it later on the same frequency.

According to the ARRL Letter, FCC staffers feel that packet is so new on the amateur scene, it would be unwise to strap it with unnecessary regulations. The plan is to let things take their course, and if that course proves not to be to the FCC's liking, then do something about it. So, at least for now, there seems to be no objection for a Novice to operate a digipeater.

(EdNote--There should be enough regulation and enforcement to control irresponsible operators, yet enough flexibility to develop new techniques which amateurs have been doing for years.)

I make mental notes but the ink fades too fast.

MINUTES OF MDARC MONTHLY MEETING
21 AUG. 1987

The meeting was called to order by Vice Pres. Dick Brown, we had one up-grade.

Old Business: Dr. George Jones found the minutes last month were incorrect, should have been 210 male members and 20 females.

Committee Reports: Joe Gregory told of coming events. Check Jim Perry's column for event and dates. Jim House reported about the awards committee meeting, also another meeting for Oct. The Awards Committee needs your black and white Ham Shack pictures for the up and coming awards.

Rocky Ridge repeater meeting 16 Sept. 1987.

Amateur Radio Classes Start:
1 Sept. 1987 (Tue.) 7:00 to 9:00 p.m. at College Park High School, Concord. Classes: Novice, Code and theory--Tech/Gen., code and theory.

Our new editor of the Carrier is Stan Christian, he has packet, so you can send your news to him that way. If you prefer to mail your news that's alright too. Thank you for taking the job Stan.

The Base Station gives MDARC a discount for the prizes the club has each month, this month Lauren had for the grand prize an ARRL operating manual.

It was announced Bob Moore is a Silent Key.

George Roush doesn't want you to forget the Xmas party, date 20 Dec. 1987.

Get in touch with Jim House if you're available 25 Sept. 1987 for the (SET) Simulated Emergency Test.

Our guest speaker was Tom Hora with the FCC in Field Operations. He brought the FCC van for all to view inside, gave a most interesting talk and answered questions.

Respectfully submitted,
Jane Walker, N6NVA
Secretary

Experience is yesterday's answer to today's problems.

MDARC BOARD MEETING MINUTES
25 AUG. 1987

Attendees:

President Scott Miles WB6PQM
Secretary Jane Walker N6NVA

Board Members:

Jay Caldis KT6Y
Jim House KA6IVF

Absent:

Vice Pres. Dick Brown KT6X
Treasurer Dick Schulze KB6MAF
E.C. Jim Perry AA6CK

Members Present:

Membership-Dr. Geo. Jones WB6QDT
Carrier Ed.-S. Christian WU6P
George Roush WB6OFH

Scott Miles called the meeting to order.

Membership: Dr. Jones informs us we have 232 members. Also he will be sending new cards in Dec. for the membership to fill out, do you have Packet, ATV, which type of radio do you have, are you available for a minor emergency during the week, etc.

Rocky Ridge Repeater meeting is 16 Sept. 1987. The new members can now use auto patch.

The Club has given free Carriers to the Ham classes, George Roush felt we should do it again this year, the board agreed.

Dr. George Jones will take care of putting the Silent Key names on the plaque we have at the Red Cross Bldg. in Concord.

A sympathy card was sent to Mrs. Norma Welsh from the club.

We need a nominating committee, see one of the Board members to be on the committee.

Next Board meeting, 23 Sept. 1987--8:00 p.m. at the home of Dick Schulze.

Respectfully submitted,
Jane Walker, N6NVA
Secretary

A Billion seconds ago it was 1951
A Billion minutes ago Jesus was alive.
A Billion hours ago our ancestors were living in the Stone Age.
A Billion dollars ago was only 10 hours and 20 minutes, at the rate Washington spends it.....

NEW GROUND RULES FOR FOREIGN RECIPROCAL

When the FCC issued its latest list of countries with which the US has a reciprocal or third-party agreements, it quietly changed the ground rules for reciprocals who also hold US licenses. Now a US license supersedes any US reciprocal permit which may be held by the foreign licensee. Thus, when an alien passes an amateur examination conducted by a VEC, his new license will supersede his reciprocal license.

This action is meant to correct potential abuse by foreign nationals who hold lower class US amateur licenses. They sometimes go back to their native country, show their US license, and receive a new license. They then come back to the US and apply for a reciprocal license (with Extra Class privileges) on the basis of their home country's ticket.

On the other side of the coin, however, this new rule may discourage many reciprocal licensees from taking a US examination. Reciprocals now receive the equivalent of an Extra Class license. Reciprocals would not want to take a US exam unless they were sure they were going to pass the Extra Class to avoid losing privileges.

A number of reciprocal licensees also hold US licenses in order to have a US call sign. Unless these licenses are Extra Class, holders of these licenses will have reason to consider submitting them for cancellation, which would be contrary to what the Commission presumably is trying to accomplish. (QST 9/87)

CABLE TELEVISION INTERFERENCE

CABLE TELEVISION is required by law to be a closed system, which means it must not be susceptible to RF interference, and it must not cause interference to other radio or TV services. Simply stated, it is up to the cable TV company to eliminate any interference problem that occurs.

SEBASTOPOL HAM FEST

SEPTEMBER 19

The Sonoma County Radio Amateurs will hold their fifth annual hamfest 8AM-2PM at the Sebastopol Community Center, 390 Morris St. (5 miles west of Santa Rosa just off Hwy 12). Admission and parking are free. Tables are \$7 at the door, \$5 in advance. Vendors setup at 7AM. Talk-in on 146.13/73. For more information contact SCRA, Box 116, Santa Rosa, CA 95402.

"The local chapter of Parents Without Partners will sponsor an Open Toga Party on Saturday." (Napa Register)

1987 CALIFORNIA QSO PARTY

The Northern California Contest Club has invited us to participate in this activity on October 3rd and 4th. It is nationally recognized as the biggest and best of all the State QSO parties and a great way to work all CA counties in one weekend. It will be field-day style and there will be lots of stations to talk to you. There will be prizes, awards and participation diplomas.

Object: Stations outside of California work as many California stations in as many California counties as possible, stations in California work anyone.

BEGINS: 1600 UTC OCTOBER 3

ENDS: 2200 UTC OCTOBER 4

Awards include certificates to the highest scoring single operator entry in each CA county, each station with 100 or more QSO's, trophies to the top three CA single ops and top multi-single and multi-multi in CA, special CQP Wine Award to the top 20 single operators in CA, a personalized bottle of Northern California Contest Club Private Reserve California wine. -MORE-

If you are interested call the Carrier Editor or Gary Caldwell, WA6VEF (415) 689-7500.

BETTER GROUND SYSTEM

Scientists working on an Army Grounding Analysis report have shown that grounding with the standard 6' metal rod, or even several rods in parallel, is often unsafe and more often inadequate for good low-noise communications.

They have found that a better ground can be established by stapling a 100' length of standard 1/8" stranded steel wire to the earth every 4' with 6" pegs. A 3 lb. hammer (in lieu of the 10 lb. sledgehammer used with the ground rod) would be sufficient to drive in the pegs.

Tests at all sites in the country show the surface wire to be from 32% to 95% more efficient than the 6' grounding rod. (World Radio 9/87)

MDARC MEMBERSHIP DIRECTORY UPDATE

These changes supplement Membership Directory changes previously published in the July and August, 1987, Carriers.

Mount Diablo Amateur Radio Club welcomes the following new members:

CORRO, Ernest J., Jr. (Ernie); WA6WOC, General (415)-357-1274
2235 West 135th Ave., San Leandro, CA 94577
PARENT, Malcolm R.; KB6FGT, Novice (415)-482-1645
20405 Skywest Dr., Hayward, CA 94541

Please note the following address and phone number changes:

KORNUSKY, Ken: P.O. Box 250302, San Francisco, CA 94125;
(415)-375-1488
RILEY, Charles: (415)-372-5613
VANERSTROM, Gary S.: 1936 Desert Circle, Apt #1, Walnut Creek, CA
94598

MDARC congratulates the following on their upgrades and/or new calls:

BOWMAN, Robert: N6PXY, General
LATTIN, Keith: N6PMF, Technician
MC CAMPBELL, Gordon: N6QEH, General
MOUNT, Howard B.: N6PYR

Note the following change in the 1987 MDARC Officers:

Carrier Editor: Stan CHRISTIAN, WU6P; 5450 Concord Blvd. #C4,
Concord, CA 94521; (415)-672-0330

Don't forget to let the membership chairman know of any changes in your status - especially upgrades and new calls: George Jones, KB6QDT; 325 Glen Arms Dr., Danville, CA 94526; (415)-837-9316.

=====

My computer and my TNC are not
hand shaking with the right hands

=====

WHAT IS AN RS232 ???
By Wayne - WB6WZY

The question for this article is "What is an RS232?". No it is not a new 2 meter rig, or a power FET. It is a standard that is a standard. It defines the circuits and signal levels that are used in the most common form of serial data transfer around a computer. This is all it is and does not tell you any more. You do not know how the data is formatted or how fast it is coming over an RS 232 interface. You do know that the "OFF" or mark level is more negative than -3 volts and that the "ON" or space level is greater than +3 volts with respect to ground. You also know which pin is which. Looking at the table you can see that pin 2 is transmitted data, pin 3 is received data and ground is on pin 7. If that turns out to be bunk, the manufacturer was full of beans when they said that the interface was RS 232 ! With this bit of information and a voltmeter you may be able to find out why that new TNC won't say anything to the computer. Just measure the voltage on pins 2 and 3 with respect to ground (pin 7) and there you are. Pin 3 reads -9 volts, but pin 2 reads .6 volts. You got the problem, the data from the computer and the data from the TNC are both on the same line. That won't work. Just switch wires between pins 2 and 3 on the cable and you may be off and running. This is a very common problem because everyone thinks they are the boss and hence take the label of transmitted data as their line. The table below lists the pin numbers and an idea of what they do. The TO column lists the receiving device. The DCE means Data Communications Equipment. A TNC would be a DCE device. The DTE is Data Terminal Equipment of a computer, for example. This is probably more room than I should take up so I guess there will be another article.

TABLE	
PIN-TO-NAME	FUNCTION
2 DEC Transmitted Data	Output Data
3 DTE Received Data	Incoming Data
4 DCE Request to send	Turn on Channel
5 DTE Clear to send	DCE out-put rdy.
6 DTE Data set ready	Terminal ready.
7 Ground	Circuit ground
20 DCE Data terminal rdy	Enable channel

(Ed: First of a series by Wayne)

***** SILENT KEYS *****

* ***** *

* ***** *

* CHARLES WELCH WA6MWU 8/10/87 *

* Sincerest condolences to his *

* wife Norma, WD6CVH *

* ***** *

* ROBERT MOORE W6GZC 8/16/87 *

* Sincerest condolences to his *

* wife Fran *

* ***** *

CRIMINAL WANTED !!!

A REWARD is being offered for information leading to the ARREST and CONVICTION of Eddy Current - charged with the induction of a 16-year-old coil named Millie Henry, robbing her of her joules. The unrectified criminal escaped from a Weston Cell where he had been clamped in ions. He is armed with a carbon rod, and considered dangerous. The escape had apparently been planned in three phases: (a) he fused the electrolytes in his cell, then (b) climbed through an open grid despite the impedance in his path, and finally (c) jumped to ground into a magnetic field. He has been missing since last faraday. Watt seems most likely is that he stole an AC motor of low capacity, and swapped it for a high-powered megacycle. He apparently left town rather than return ohm on a short circuit. (ARNS 7/87)

* * * * *

>> IMPORTANT PRECAUTIONS <<

The possibility of your station causing interference can be minimized by using properly designed equipment, establishing an excellent station ground, using properly matched monoband antennas, and taking care to operate a transmitter correctly. Interference possibilities multiply with higher RF output power, and it is often possible to minimize or eliminate a critical interference problem by reducing transmitter RF output power until the difficulty has been remedied. In any case, it's best to operate the rig at less than its maximum rated RF output power.

(Amateur Radio 9/87)

POPE JOHN PAUL II

Members of the Southeastern Michigan DX Association will operate special event station K8JP, commemorating the visit of Pope John Paul II to the Detroit area, September 19, 0001Z-2400Z. Operations will be 10M thru 80M, both 'phone and CW.

For special commemorative QSL's send QSL and SASE to Larry Zabkowski, K8NLD, 18082 Gaylord, Fraser, MI 48026

MUSICAL CODE

For those Amateurs interested in modern music, there is a composition in which an authentic spark-gap transmitter sending Morse Code code is used as an instrument. The composer is Vladimir Ussachevsky, and the composition is entitled "Wireless Fantasy" (1960). It is on The album "Music for Electronic and Older Instruments", Composer's Recordings no. 227.

Only four Amateur radio operator test sessions are held per year in Canada. The annual license is \$26. (\$20. if you already hold a license) plus a testing fee for each portion of the examination taken.

ARRL

Request for Temporary Authority

The ARRL is drafting a Request for Temporary Authority for about 40 stations to participate in a controlled study of HF packet networks. "Under the Authority, these stations would be permitted to operate HF packet nodes under automatic control (automatic packet operation is allowed above 50 MHz but not on the HF or MF bands.) The study will be limited to six months. (ARRL Letter 6/87)

NEW AMATEUR LICENSING

New amateur licensing this year is running 70% ahead of 1986. In May, FCC processed 18,889 applications, including 6,797 NEW amateurs. The five month total to May 30 was 14,679 compared with 8,613 in 1986. (ARRL Letter 6/87)

* * * * *

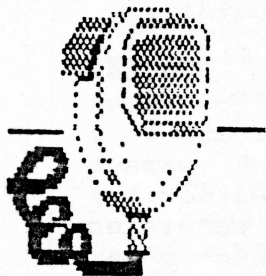
The FCC's Novice Enhancement proceeding is doing what was intended...to interest newcomers in pursuing the Amateur Radio hobby. Ninety-three percent of new applicant Form 610 processed during May 1987 entered Amateur Radio at Novice level. (WSYI 7/87)

NEW ISSUE FOR STAMP COLLECTORS

A newsletter from the Israel ARC reports the issuance of Israel's first postage stamp honoring Amateur Radio. The Israel ARC purchased a large quantity of these 2.50-shekel stamps that were first issued on June 14. Anyone who would like to reserve one of the first-day covers should write to: Israel ARC, P.O.Box 4099, Tel-Aviv 61040, ISRAEL. Cost \$5.00

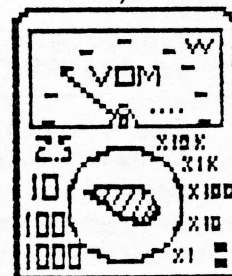
ATTENTION !! TECHNICIANS

Reminder !! If you think you will upgrade to General Class, remember that you must show you were licensed on or before March 21, 1987, or you will be required to take the written portion of the test (Element 3B). Keep your license in a safe place even if you renew as a Technician to show the date you first received your Technician License.



MDARC AUCTION

FRIDAY OCT 16



SEMI-ANNUAL AMATEUR RADIO AUCTION
2100 TICE VALLEY BLVD
WALNUT CREEK
(GRACE PRESBYTERIAN CHURCH)

DOORS OPEN AT 6:00 PM, AUCTION STARTS AT 7:00 PM

FREE ADMISSION

WE INVITE ALL RADIO ENTHUSIASTS TO THE MT. DIABLO AMATEUR RADIO CLUB'S AUCTION. WE HAVE UPGRADED THE AUCTION FOR YOUR ENJOYMENT. OUR TWO AUCTIONS WERE QUITE AN IMPROVEMENT OVER PRIOR YEARS SO THEREFORE WE WILL ONCE AGAIN LIMIT ITEMS FOR THE AUCTION TO:

AMATEUR RADIO EQUIPMENT AND ALL PERTINENT ACCESSORIES
RECEIVING AND/OR TRANSMITTING DEVICES
INTERESTING ELECTRONIC GADGETS
TEST EQUIPMENT
COMPUTERS AND ACCESSORIES

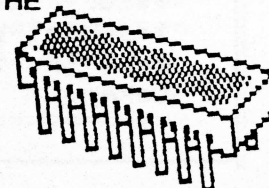
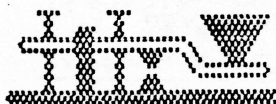
WE INVITE YOU TO BRING YOUR UN-NEEDED BUT WORKING, OR SERVICEABLE GEAR FOR SALE BY THE CLUB.

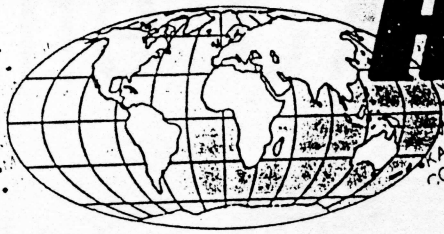
WE DO NOT WANT NOR WILL ACCEPT:

BOAT ANCHORS
TRANSFORMERS
OIL CAPACITORS
RUSTED OR OLD CHASSIS' OR
ANYTHING THAT NEEDS A HAND-TRUCK, WHEELBARROW OR CRANE
OR ANYTHING ELSE THAT YOU ARE TOO LAZY TO HAUL TO THE DUMP.
(REMEMBER IF YOU THINK ITS JUNK, IT PROBABLY IS, LEAVE IT HOME)

THE AUCTION CHAIRMAN IS SCOTT THOMAS, N6LGB. HE HAS THE FINAL SAY. IF YOU HAVE ANY DOUBTS OR QUESTIONS CALL HIM AT: 685-3784.

SIMPLIFIED DIRECTIONS TO THE AUCTION: TAKE HWY 24 TO THE PLEASANT HILL ROAD EXIT ON THE LAFAYETTE/WALNUT CREEK BORDER AND FOLLOW THE SIGNS TO ROSSMOOR. THE AUCTION IS IN THE CHURCH ON THE LEFT SIDE OF TICE VALLEY BLVD ABOUT 500 FEET PAST THE ENTRANCE TO THE ROSSMOOR RETIREMENT VILLAGE.





HAM RADIO OUTLET

LARGEST HAM OUTLET IN THE WORLD

FULL LINE OF ACCESSORIES IN STOCK AT LOW PRICE.

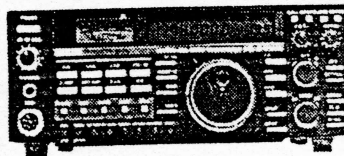
7 STORE BUYING POWER

ICOM IC-761



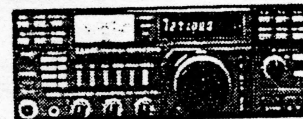
HF SUPERIOR GRADE TRANSCEIVER
SALE! CALL FOR PRICE

ICOM IC-275A/275H



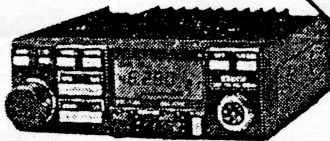
138 - 174 MHz
IC-275A (25w) IC-275H (100w)
GREAT PRICE!

ICOM IC-1271A



1.2 GHz Transceiver:
The First Full-featured
1240-1300 MHz Transceiver
ARE YOU READY FOR
1.2 GHz OPERATION?

ICOM IC-28A/28H



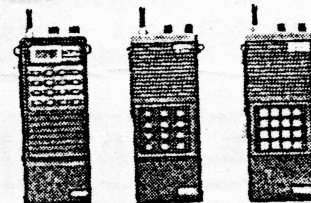
2-METER MOBILES
IC-28A (25w) IC-28H (45w)
LOW PRICE!

NOW! RAPID DELIVERIES



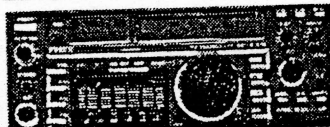
FROM STORE NEAREST YOU

ICOM HAND-HELD VHF/UHF



IC-02AT IC-2AT 2MTR
IC-03AT IC-3AT 220 MHz
IC-04AT IC-4AT 440 MHz

ICOM IC-735



The Latest in ICOM's Long
Line of HF Transceivers
CALL FOR LOW, LOW PRICE

ICOM IC-R7000



25 MHz-1300 MHz
IN STOCK FOR
IMMEDIATE DELIVERY

ICOM IC-μ2A/μ2AT

Mini
Hand-Held
AT Model
w/ TT Pad
GREAT
PRICE!



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Jim Rafferty N6RJ
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(714) 761-3033, (213) 860-2040
Between Disneyland &
Knots Berry Farm
ATLANTA, GA 30340
6071 Buford Hwy.
(404) 263-0700
Neil, Mgr. KC4MJ
Doraville, 1 mi. north of I-285

BURLINGAME, CA 94010
999 Howard Ave.
(415) 342-5757
George, Mgr. WB6DSV
5 miles south on 101 from SFO
OAKLAND, CA 94606
2210 Livingston St.
(415) 534-5757
Al, Mgr. WA6SYK
17N-5th Ave./17S-16th Ave.

PHOENIX, AZ 85015
1702 W. Camelback Rd.
(602) 242-3515
Bob, Mgr. K7ROH
East of Hwy. 17
SAN DIEGO, CA 92123
5375 Kearny Villa Rd.
(619) 560-4900
Tom, Mgr. KM6K
Hwy. 163 & Claremont Mesa Blvd.

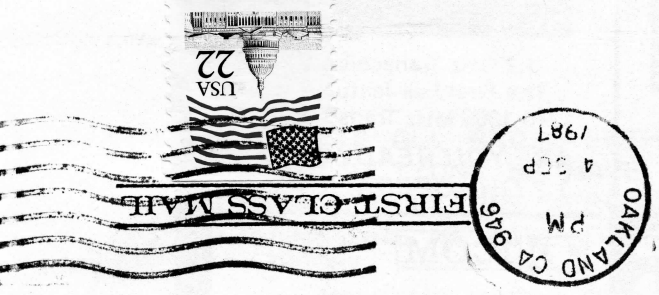
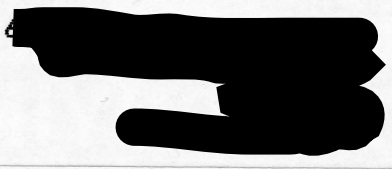
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From:
Mt. Diablo Amateur Radio Club, Inc.
P.O. Box 23222
Pleasant Hill, Calif. 94523
Affiliated with the ARRL
Affiliated with the American Red Cross

The CARRIER

THE BASE STATION

YOUR CONTRA COSTA HAM HEADQUARTERS
FOR YOUR AMATEUR RADIO NEEDS.

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AVANTI	BUTTERNUT	LARSEN
ASTRON	CALLBOOKS	HAM PUBLICATIONS
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AMECO	CONNECTORS	REGENCY
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BALUNS	GORDON WEST	WELZ METERS
BEARCAT	HUSTLER	SPEAKERS

YAESU

1839 East St. (across from Sattlers

Concord, CA 94520 (415)685-7388

SISTER CLUB



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